



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/006,499 | 12/03/2001 | Danan Dou | DP-305355 | 8068 |

7590 04/16/2004

Vincent A. Cichosz
DELPHI TECHNOLOGIES, INC.
4th Floor
1450 West Long Lake
Troy, MI 48098

EXAMINER

MEDINA SANABRIA, MARIBEL

ART UNIT PAPER NUMBER

1754

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/006,499 | DOU, DANAN | |
| | Examiner | Art Unit | |
| | Maribel Medina | 1754 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/30/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1754

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-14 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,459,119 (Abe et al).

Abe et al disclose a catalyst configuration comprising:

a monolithic carrier (instant substrate)

a first layer (instant underlayer) disposed on the monolithic carrier (instant substrate), comprising Pd, Pt and combinations thereof (instant first catalyst composition); and

a second layer (instant overlayer) disposed on the first layer comprising rhodium (instant second catalyst composition) (See col. 8, line 65 to col. 9, line 39 and col. 10, line 51 to col. 11, line 25).

Regarding the limitations of claims 1, and 17-20 that reads “second catalyst composition comprising greater than or equal to about 75 (80, 90, 95 and 99) wt. % of Rh in the catalyst configuration” Abe et al disclose (catalyst type B) only Rhodium in the second layer, and no rhodium in the first layer, therefore, it meets the instantly claimed limitation since the second layer comprises all the rhodium present in the catalyst composition (100 wt.%).

Regarding claims 2 and 3, Abe et al disclose in col. 5, lines 10-19, that the catalyst can further comprise a rare earth oxide.

Art Unit: 1754

Regarding claim 4, Abe et al disclose that the first layer comprises palladium or platinum (See col. 9, line 1) and in col.11, lines 20-25 disclose that the layers may contain more than one noble metal.

Regarding claim 5, Abe et al disclose that the second layer comprise an outer surface layer comprising rhodium particles (See col. 4, lines 17-24).

Regarding claims 6-8, Abe et al disclose that the rhodium surface coating layer should have a thickness of 15 μ m or less, preferably in the range from 5-10 μ m (See col. 4, lines 47-53).

Regarding claims 9-11, Abe et al disclose a Rh loading rate in the range from 2.5-15 g/ft³ (See col. 5, lines 62-64).

Regarding claims 12-14, Abe et al disclose in Table 1, in Example 2, a first coating layer loading of 0.1 g/cc (3.44 g/in³) and a second coating layer loading of 0.06 g/cc (0.98 g/in³) (See cols. 13-14).

No difference is seen between the instantly claimed catalyst configuration and the catalyst composition or configuration of Abe et al.

Response to Arguments

3. Applicant's arguments filed 11/25/2003 have been fully considered but they are not persuasive.

Applicants argue :

"Applicant draws the Examiner's attention to Col. 9, lines 27-29. Here Abe et al. qualify and clarify the compositions of the layers and specifically state that the "first catalyst layer may be a Rh/Pd/Pt Mixed phase." In other words, they clarify that the concentration of Rh in the underlayer is not limited. The composition of that layer can be

Art Unit: 1754

Pt/Pd/Rh. Abe et al teach various features for their catalyst, e.g., "the catalyst layer contains, as a whole, three noble metals of Pt, Pd, and Rh " to mean that when "the section of the catalyst layer formed on a monolithic carrier is observed, each pf the Pt, Pd and Rh exists at any portion of the thickens direction of the catalyst layer." (Col. 3m lines 15-23; and abstract). Additionally, Abe et al. teach "the catalyst layer has a the outer surface, exposed catalyst particles comprising a heat resistant inorganic oxide and at least Rh loaded thereon." (Col. 4, lines 13-16; and abstract)." (Remarks filed on 11/25/03, page 7)

This argument is not persuasive. The Examiner agrees with the applicant, Abe et al disclose that the first catalyst layer (instantly claimed underlayer) may contain Rh, as cited by Abe et al in col. 9, lines 27-30. However, Abe et al also disclose in col. 9, lines 31-40, that it is preferred to use in the first catalyst layer, particles Pt or Pd or a combination of both since Rh gives not noticeable improvement to the catalytic activity of the catalyst. Therefore, one of ordinary skilled in the art would have-not used Rh particles in the first catalyst layer in view of Abe et al teachings.

Applicants further argue:

"There is no teaching with respect to the specific amount of Rh in the outer layer versus the overall configuration..." (remarks filed on 11/25/03, page 7-8)

This argument is not persuasive, even through Abe et al do not disclose the percentage by weight of Rh in the catalyst configuration, Abe et al disclose that Rh is only present in the overlayer of the catalyst type B, with no rhodium in the first layer (underlayer), therefore, this inherently means that 100 wt % of the Rh is present in the overlayer.

Art Unit: 1754

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maribel Medina whose telephone number is (571) 272-1355. The examiner can normally be reached on Monday through Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Maribel Medina
Examiner
Art Unit 1754


STEVEN BOS
PRIMARY EXAMINER
GROUP 1100